Appln. No. 09/865,368
Amendment dated July 7, 2005
Reply to Office action of March 7, 2005
Docket No. 6169-202

IBM Docket No. BOC9-2000-0066

REMARKS/ARGUMENTS

These remarks are made in response to the final Office Action of March 7, 2005 (Office Action). As this response is filed after the 3-month shortened statutory period along with an appropriate fee and a petition for a retroactive extension of time.

In paragraph 3, the Examiner has rejected claims 1, 3, 5, 7-11, 13, 15-21, 24, 26, 28, 30-34, 36, 38-44, and 46 under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 5,261,044 to Dev, *et al.* (Dev) and U.S. Patent No. 6,546,263 to Petty, *et al.* (Petty). In paragraph 4, the Examiner has rejected claims 4, 14, 27, and 37 under 35 U.S.C. § 103(a) as being unpatentable over Dev and Petty as applied to claims 1, 10, 24 and 33 and in view of U.S. Patent 6,225,999 to Jain, *et al.* (Jain). In paragraph 5 of the Office Action, the Examiner has rejected claim 23 under 35 U.S.C. § 103(a) as being unpatentable over Jain and Petty.

In response to the Office Action, Applicants have amended claims 1, 10, 19, 23, 24, 33, and 42 to clarify various disclosed aspects of the invention. Specifically, claims 1, 10, 19, 23, 24, 33, and 42 have been amended to clarify that the graphical user interface can be divided into sections that are simultaneously displayed, where one section displays the graphical display representations (the node map section 10), and where another section displays determined values of the defined metrics (the details display section 15). This amendment is supported by page 14, lines 1-12, by the FIGS 1-3, and throughout the specification.

No new matter has been added as a result of these amendments.

Overview of Applicants Claimed Invention

Prior to addressing the rejections on the art, a brief review of the Applicants' invention is in order. The Applicants' claimed and disclosed subject matter teaches a system, method, and apparatus for dynamically exposing the nodes of a graphical display

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or a display map for network administration purposes. Each node on the display map can represent a defined component within a distributed network. Different states, such as important states like component outages and/or warnings for monitored components, can be associated with graphical depictions that selectively appear in the display map responsive to gathered network metrics. Displayed icons, icon thresholds, component attributes, and the like can be configured by a user via a graphical user interface. In one embodiment, a multitude of different monitoring bots, or autonomous software agents, can be used as intermediaries between the nodes of the display map and the monitored components, therein forming a layer of abstraction that facilitates interoperability among different hardware/software devices or platforms. It should be appreciated that displaying multiple diversely located metric values upon a single display in a manner easy for an administrator to comprehend can facilitate the administration of heterogeneous systems distributed across a network space.

Dev and Petty Fail to Teach Each Claimed Limitation

Claims 1, 3, 5, 7-11, 13, 15-21, 24, 26, 28, 30-34, 36, 38-44, and 46 under 35 U.S.C. § 103(a) as being unpatentable over Dev in view of Petty.

A. Overview of Dev

Dev discloses a layered network management system. The layers include a user interface 10, a virtual network machine 12, a device manager 14, and a network 18 containing a multitude of monitored network components. All devices in the network layer 18 convey information to the device communication manager 14. The device communication manager 14 converts the communication protocol of network devices into a standardized protocol established for the network management system. The virtual network machine 12 is a network management server that can centrally gather device information, store this information in a database 16, and serve network information to

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one or more user interfaces 10. Each of these user interfaces can have interface specific settings via the view personality module 20.

Dev defines a server that centrally manages network data, whereas the Applicants' agents are decentralized autonomous software objects distributed at suitable locations within a heterogeneous environment. Each software agent can be configured to monitor a particular component to which the agent has been assigned. Accordingly, the virtual network machine 12 containing the database manager is a complex, computationally heavy, centralized server, whereas a software agent is a discrete software unit uniquely constructed to monitor selected component attributes in a dedicated and efficient manner.

Applicants note that Dev appears to contain no teachings about quantizing discrete levels for each metric (column 2, lines 46-column 3, line 14 was cited for this teachings. The levels and icons referred to in Dev are referencing different hierarchy levels and icons for navigating to different ones of these levels. The teachings do not relate to quantizing discrete levels for each metric as claimed). This misunderstanding has caused the remaining cited portions of Dev to be improper.

For example, Applicants claim assigning a unique indicator to each of the quantized discrete levels (each level representing a numeric range for a metric). Dev teaches assigning different hieratical levels to different selectable icons. These teachings are not equivalent or even related to each other.

B. Overview of Petty

Petty discloses a mobile terminal, such as a mobile phone or PDA, that displays a rotating icon. The rotating icon can cycle through various operating conditions of the mobile terminal. For example, as shown in FIG. 1A, the rotating icon can rotate among a battery icon, a reminder icon, a power icon, a clock icon, and an e-mail icon. Each icon can have multiple representations that indicate the status of the depicted condition. For

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example, as shown in FIG. 1B, the battery icon can indicate full, ¾ full, ½ full, ¼ full, and low states of remaining battery capacity.

Petty is within a non-analogous field of endeavor from the present invention. Petty is limited to and/or directed towards displaying localized phenomena within a mobile device. The present invention provides a means for centrally administering a distributed network by centrally monitoring geographically disperse components. One of ordinary skill in the art would not turn to Petty for teaching pertinent to network administration problems.

C. Dev and Petty Fail to teach Simultaneously Displaying Two Sections

In each independent claim, Applicants claim that two sections are to be simultaneously displayed within a graphical user interface. In one section, components of a network that have been selected by users are graphically displayed in a manner as to illustrate relative communication relationships between the network components. The displayed graphics also indicate a discrete level that corresponds to a current metric value for the component. That is, a component representing a server may appear red when malfunctioning and green when operating in normal ranges. A network bus may be displayed showing how various one of the network components interact.

In the second section, current values or metrics for components are displayed. For example, a table providing values for defined metrics for network components can be presented. As shown in FIG. 2, for instance, different servers can be displayed by name, along with values that corresponding to metric columns, such as CPU, network, run queue, memory, and the like. It should be appreciated that the graphically rendered indicators of section one correspond to discrete value levels for values being displayed in section two. That is, the two sections are related to each other, each being dynamically updated as bots retrieve values from the network components.

Dev provides contradictory teachings to those claimed. Specifically, Dev teaches that a display of network values is to occur in a decomposable fashion according to defined hierarchy levels. For example, a map showing different regional headquarters (one hierarchy level shown in FIG 7A) can include selectable offices. When an office is selected, a an office layout view (a second hierarchy level shown in FIG. 7B) can be displayed instead of the map. When a group within the office layout is selected, a lab view (third hierarchy level shown in FIG. 7C) can be displayed instead of the office layout view.

Dev teaches that this layered approach is preferable over other approaches, such as the claimed approach, where visual indicators showing network communicatively and indicating status levels for the graphically depicted indicators is shown within the same display as metric values for the indicators. Further, Dev's approach that is dependent upon a decomposable layering or hierarchy would not permit a user to manipulate the view (by selecting display metrics) as the Applicants claim. The two approaches are contradictory.

Petty fails to cure the deficiencies of Dev, and instead imposes additional contradictions with the Applicants approach. Petty teaches the sequential display of status information in a space limited mobile display. Petty fails to teach or suggest simultaneously displaying graphics (with different indicators for discrete levels) as well as metric values upon which the indicators are based.

D. Improper Joining of References

It is improper to combine references for purposes of a 103 rejection in a manner that would render either reference unsatisfactory for its intended purpose (MPEP 2143.01). Modifying Dev to simultaneously display a first and second section in the manner claimed, would contradict Dev's teachings. That is, Dev teaches a hieratical decomposition of display layers, while the Applicants claim a planar approach.

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Attempting to modify the display of Dev so that two or more different layers can be simultaneously presented would render Dev unsatisfactory for its intended purpose (and would alter the principle of operation of Dev, which is also not allowed by MPEP 2143.01).

Petty's purpose is to efficiently present information on mobile screens by means of a rotating icon. This allows a significant amount of information to be presented in a compact fashion upon small screens. Modifying Petty so that that icons representing network components are represented in a manner to illustrate relative communication relationships between the components of the network, contradicts the display of icons in a rotating fashion. It also contradicts the displaying of information in a space conservative fashion upon a mobile screen, which is a purpose of Petty. Further still, simultaneously displaying metric values in addition to icons based upon the values within different sections of a screen would definitely contract the teachings of Petty.

Any modifications of Petty that would permit displays to illustrate network relationships would render Petty unsatisfactory for its intended purpose. Similarly, any modifications of Petty to simultaneously display graphics with visual indications for discrete levels and values for metrics upon which the discrete levels were determined would contradict the teachings of Petty.

Consequently, the teachings of both Petty and Dev are such that any modifications made to either of them for purposes of rendering the claimed invention obvious are improper modifications that would render either invention unsuitable for its intended purposes, which is explicitly prohibited by MPEP 2143.01.

E. Technological and Practical Problems with Combining Dev and Petty

Further, even if one were to attempt to apply the teachings of Dev and Petty to a non-analogous field, the display method taught by Petty is would be unsuited for the purposes of network administration. That is, to administer a network, visually depicting

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interactions among various communicatively linked components (as shown in FIG. 2, item (10) of the Applicants' specification) can be important. Petty's teachings runs counter to this in that Petty teaches that icons are to be rotated to conserve display space, as opposed to being simultaneously displayed. Consequently, Petty's teachings are not capable of visually depicting inter-component interactions.

Additionally, the architecture described for Dev is unsuitable for implementation upon a mobile device, which is the architecture defined for Petty. For teachings of Dev and Petty to be combined, a major overall of the infrastructures of either or both of Dev and Petty would be required. Yet neither reference explicitly teaches or suggests such an overhall. Nor does either reference explicitly suggest the desirability for combining the references in the manner suggested. Consequently, even if MPEP rules did not explicitly prohibit Dev to be combined with Petty in the manner suggested, the suggestive power of each reference to be combined is insufficient to overcome the difficulties of combining the references (especially considering a lack of explicit motivation within either reference, the different architectures and the different purposes of the references.)

For all of the above reasons, Applicants respectfully request the rejections o claims 1, 3, 5, 7-11, 13, 15-21, 24, 26, 28, 30-34, 36, 38-44, and 46 be withdrawn.

Jain Fails to Cure the Deficiences of Dev and Petty

Claims 4, 14, 27, and 37 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Dev and Petty in view of Jain. Claim 23 has been rejected under 35 U.S.C. § 103(a) as being unpatentable over Jain and Petty.

Jain discloses a graphical user interface is provided which permits a network manager to select a limited number of network components for display in a topological map, along with pertinent information relating thereto, while removing the display of undesirable or unnecessary data. In operation, a network manager can select a few key routers in an overall network, and have only those routers, and their interconnections,

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displayed on the screen of the computer monitor. Other components connected to those routers, which have not been selected by the network manager, are not displayed. However, information is provided to inform the network manager that other connections to those routers may exist. In addition, information relating to the performance between the key routers and other components connected to the key routers is also displayed.

Jain, Dev, Petty, and combinations thereof fail to teach or suggest simultaneously displaying graphics (with different indicators for discrete levels) as well as metric values upon which the indicators are based. Accordingly, each claimed limitation is not taught by the cited references.

Additionally as stated above, any combination of references which render a reference unsatisfactory for its intended purpose is an improper reference. Since modifying Dev and/or Petty to combine their teachings with teachings from Jain in an attempted approximation of the claimed invention would render both Dev and Petty unsatisfactory for their intended purposes, neither can be properly combined with Jain.

For the above reasons, Applicants respectfully request that the rejections to claims 4, 14, 27, and 37 be withdrawn.

Applicants believe that this application is now in full condition for allowance, which action is respectfully requested. Applicants request that the Examiner call the undersigned if clarification is needed on any matter within this Amendment, or if the Examiner believes a telephone interview would expedite the prosecution of the subject application to completion.

Respectfully submitted,

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Gregory A. Nelson, Registration No. 30,577
Brian K. Buchheit, Registration No. 52,667
AKERMAN SENTERFITT
Customer No. 40987

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